In the Claims

1.   (Currently amended) A system for sending high fidelity sound between wireless units, comprising:

an audio interface operable to receive audible sounds and generate <u>first and second analog</u> signals that represent the audible sounds;

a coding module operable to encode a ~~first~~ portion of the <u>first analog</u> signals and a ~~second~~ portion of the <u>second analog</u> signals ~~from the audio interface, wherein the audible sounds represented by the first portion and the second portion are encoded at a rate greater than eight kilohertz~~ <u>at least in part by</u>:

<u>receiving the first and second analog signals from the audio interface;</u>

<u>sampling the first analog signals at a first rate;</u>

<u>grouping at least two samples of the first analog signals to represent the portion of the first analog signals;</u>

<u>sampling the second analog signals at a second rate; and</u>

<u>grouping at least two samples of the second analog signals to represent the portion of the second analog signals, the first and second rates combining to form a rate greater than eight kilohertz such that the audible sounds represented by the portion of the first analog signals and the portion of the second analog signals are encoded at a combined rate greater than eight kilohertz</u>; and

a wireless module operable to transmit the first encoded portion over a first synchronous channel and the second encoded portion over a second synchronous channel.

2.   (Currently amended) The system of Claim 1, wherein the audio interface comprises:

a first input device operable to receive <u>first</u> audible sounds and generate <u>the first</u> analog signals ~~that represent,~~ <u>the first analog signals representing</u> the <u>first</u> audible sounds;

a second input device operable to receive <u>second</u> audible sounds and generate <u>the second</u> analog signals ~~that represent,~~ <u>the second analog signals representing</u> the <u>second</u> audible sounds; and

a delay device operable to delay the <u>second</u> analog signals from the second input device.

3.   (Original) The system of Claim 2, wherein the first input device is a microphone.

4.   (Currently amended) The system of Claim 1, wherein the coding module comprises:

a first encoder operable to <u>sample the first analog signals at the first rate and to</u> encode ~~portions~~ <u>the first portion</u> ~~of the signals at a certain rate~~; and

a second encoder operable to <u>sample the second analog signals at the second rate and</u> <u>to</u> encode ~~portions~~ <u>the second portion</u> ~~of the signals at a certain rate~~, the <u>second</u> analog signals encoded by the second encoder being out of phase with the <u>first analog</u> signals encoded by the first encoder.

5.   (Currently amended) The system of Claim 4, wherein the <u>second analog</u> signals encoded by the second encoder are one-hundred and eighty degrees out of phase with the <u>first analog</u> signals encoded by the first encoder.

6.   (Currently amended) The system of Claim 1, wherein the coding module encodes the ~~signals~~ <u>first and second portions</u> according to G.711.

7.   (Original) The system of Claim 1, further comprising a controller operable to determine whether high fidelity sound should be transmitted and instruct the wireless module to establish the synchronous channels if high fidelity sound should be transmitted.

8.   (Original) The system of Claim 1, wherein the first synchronous channel and the second synchronous channel comprise synchronous connection-oriented links.

9.   (Original) The system of Claim 1, wherein:

the wireless module is further operable to receive a first encoded portion and a second encoded portion representing audible sounds, the second portion being out of phase with the first portion; and

the coding module is further operable to decode the first encoded portion and the second encoded portion.

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10.   (Original) The system of Claim 9, wherein the coding module is further operable to generate analog signals that represent the audible sounds and send the analog signals from the first portion over a first link and the analog signals from the second portion over a second link, and further comprising:

a delay device coupled to the first link and operable to delay the analog signals on the first link so that they are in phase with the analog signals on the second link; and

an audio output device coupled to the first link and the second link and operable to generate audible sounds based on the analog signals on the first and second links.

11.   (Currently amended) A method for sending high fidelity sound between wireless units, comprising:

receiving audible sounds at a wireless unit;

generating first and second analog signals that represent the audible sounds;

~~encoding a first portion of the signals;~~

encoding a ~~second~~ portion of the first analog signals and a portion of the second analog signals at least in part by:

sampling the first analog signals at a first rate;

grouping at least two samples of the first analog signals to represent the portion of the first analog signals;

sampling the second analog signals at a second rate; and

grouping at least two samples of the second analog signals to represent the portion of the second analog signals, the first and second rates combining to form a rate greater than eight kilohertz such that the audible sounds represented by the portion of the first analog signals and the portion of the second analog signals are encoded at a combined rate greater than eight kilohertz; and

transmitting the ~~first~~ encoded portion of the first analog signals over a first synchronous channel; and

transmitting the ~~second~~ encoded portion of the second analog signals over a second synchronous channel; ~~wherein the audible sounds represented by the first portion and the second portion are encoded at a rate greater than eight kilohertz.~~

12.   (Currently amended) The method of Claim 11, wherein generating signals comprises: generating two sets of analog signals that represent the audible sounds; and comprises delaying the second set of analog signals so that it is out of phase with the first set of analog signals.

13.   (Currently amended) The method of Claim 12, wherein the delay results in the second set of analog signals being one-hundred and eighty degrees out of phase with the first set of analog signals.

14.   (Currently amended) The method of Claim 11, wherein comprising:

encoding a first the portion of the first analog signals comprises encoding portions of the signals at a certain the first rate at a first encoder; and

encoding a second the portion of the second analog signals comprises encoding portions of the signals at the second rate at a second encoder.

15.   (Original) The method of Claim 11, wherein the analog signals are encoded according to G.711.

16.   (Original) The method of Claim 11, further comprising:
determining whether high fidelity sound should be transmitted; and
establishing the synchronous channels if high fidelity sound should be transmitted.

17.   (Original) The method of Claim 16, wherein determining whether high fidelity sound should be transmitted comprises receiving a message indicating that high fidelity sound is desired.

18.   (Original) The method of Claim 11, wherein the first synchronous channel and the second synchronous channel comprise synchronous connection-oriented links.

19.   (Original) The method of Claim 11, further comprising:

receiving a first encoded portion and a second encoded portion representing audible sounds, the second portion being out of phase with the first portion;

decoding the first encoded portion and the second encoded portion.

20.   (Original) The method of Claim 19, further comprising:

generating analog signals that represent the audible sounds in the first encoded portion on a first link;

generating analog signals that represent the audible sounds in the second encoded portion on a second link;

delaying the analog signals on the first link to bring them into phase with the analog signals on the second link; and

generating audible sounds based on the analog signals on the first and second links.

21.   (Currently amended) A system for sending high fidelity sound between wireless units, comprising:

a wireless module operable ~~to~~ to:

facilitate establishing a first synchronous channel and a second synchronous ~~channel~~ channel; and

receive encoded portions of audible sounds over the first synchronous channel and encoded portions of the audible sounds over the second synchronous channel, ~~the encoded audible sounds represented by the portions encoded at a rate greater than eight kilohertz; and~~ the encoded portions of the audible sounds having been encoded by:

sampling first analog signals at a first rate;

grouping at least two samples of the first analog signals to represent a portion of the first analog signals;

sampling second analog signals at a second rate; and

grouping at least two samples of the second analog signals to represent a portion of the second analog signals, the first and second rates combining to form a rate greater than eight kilohertz such that the audible sounds represented by the portion of the first analog signals and the portion of the second analog signals are encoded at a combined rate greater than eight kilohertz; and

a processor operable to analyze the encoded portions to determine what audible sounds they represent and to determine a command based on the audible sounds represented.

22.   (Original) The system of Claim 21, wherein the encoded portions from the first synchronous channel are one-hundred and eighty degrees out of phase with the encoded portions from the second synchronous channel.

23.   (Original) The system of Claim 21, further comprising:

a coding module operable to decode the encoded portions into analog signals that represent the audible sounds; and

an audio interface operable to generate audible sounds based on the analog signals.

24.   (Original) The system of Claim 23, wherein:

the audio interface is further operable to receive audible sounds and generate analog signals that represent the audible sounds;

the coding module is further operable to encode the analog signals; and

the wireless module is further operable to transmit the encoded audible signals.

25.   (Original) The system of Claim 21, wherein the synchronous channels comprise synchronous connection-oriented links.

26.   (Currently amended) A method for sending high fidelity sound between wireless units, comprising:

establishing a first synchronous channel and a second synchronous channel;

receiving encoded portions of audible sounds over the first synchronous channel;

receiving encoded portions of the audible sounds over the second synchronous channel, the encoded portions of the audible sounds having been encoded by:

sampling first analog signals at a first rate;

grouping at least two samples of the first analog signals to represent a portion of the first analog signals;

sampling second analog signals at a second rate; and

grouping at least two samples of the second analog signals to represent a portion of the second analog signals, the first and second rates combining to form a rate greater than eight kilohertz such that the audible sounds represented by the portion of the first analog signals and the portion of the second analog signals are encoded at a combined rate greater than eight kilohertz; and

analyzing the encoded portions to determine the audible sounds represented by the portions; and

determining a command based on the audible sounds represented; wherein the encoded audible sounds represented by the portions are encoded at a rate greater than eight kilohertz represented.

27.   (Original) The method of Claim 26, further comprising:

decoding the encoded portions into analog signals; and

generating audible sounds based on the analog signals.

28.   (Original) The method of Claim 26, further comprising:

receiving audible sounds;

generating analog signals based on the audible sounds;

encoding the analog signals; and

transmitting the encoded audible sounds.

29.   (Original) The method of Claim 26, wherein the encoded portions from the first synchronous channel and the second synchronous channel are out of phase.

30.   (Original) The method of Claim 26, wherein the wireless channels comprise synchronous connection-oriented links.

31.   (Currently amended) A system for sending high fidelity sound between wireless units, comprising:

an audio interface operable to receive audible sounds and generate analog signals that represent the audible sounds, the audio interface comprising:

a first audio input device operable to receive audible sounds and generate first analog signals that represent the audible sounds,

a second audio input device operable to receive audible sounds and generate second analog signals that represent the audible sounds, and

a delay device operable to delay the second analog signals from the second audio input device so that they are one-hundred and eighty degrees out of phase with the first analog signals from the first audio input device;

a coding module operable to encode ~~portions~~ a portion of the first analog signals from the first audio input device and ~~portions~~ a portion of the delayed second analog signals from the second audio input device, the coding module comprising:

a first encoder operable to encode ~~portions~~ the portion of the first analog signals from the first audio input device according to G.711 at least in part by:

receiving the first analog signals from the audio interface;

sampling the first analog signals at a first rate; and

grouping at least two samples of the first analog signals to represent the portion of the first analog signals; and

a second encoder operable to encode ~~portions~~ the portion of the delayed second analog signals from the second audio input device according to G.711 at least in part by:

receiving the second analog signals from the audio interface;

sampling the second analog signals at a second rate; and

grouping at least two samples of the second analog signals to represent the portion of the second analog signals, the first and second rates combining to form a rate greater than eight kilohertz such that the audible sounds represented by the portion of the first analog signals and the portion of the second analog signals are encoded at a combined rate greater than eight kilohertz;

a wireless module operable to establish two synchronous connection-oriented links if high fidelity sound should be transmitted and transmit the encoded portions from the first

encoder over the first synchronous connection-oriented link and the encoded portions from the second encoder over the second synchronous connection-oriented link; and

a processor operable to determine whether high fidelity sound should be transmitted and instruct the wireless module to establish links if high fidelity sound should be transmitted.